AVERAGE WEEKLY EARNINGS, SEPTEMBER QUARTER 1971

Reference No. 6.18

The estimates of average weekly earnings shown below are derived from particulars of employment and wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. The figures relate to civilians only. In addition to salary and wage payments at award rates, the total earnings figures used in the calculation of average weekly earnings include the earnings of employees not covered by awards, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the period, etc.

2.   A revised series of estimates for Australia for each quarter from September quarter 1961 and for each State from September quarter 1966 was published in the previous issue of this statement. The Australian estimates for the whole period are shown on page 3, but for the States only the estimates for recent quarters have been included in the table below.

3.   Particulars of wages and salaries paid are not available for males and females separately from the sources used for this series; average weekly earnings have therefore been calculated in terms of male units, i.e. total male employees plus a proportion of female employees, the proportion being determined by the estimated ratio of female to male average earnings. Different ratios, based on information from the annual surveys of weekly earnings and hours, from a sample survey carried out in November 1969 and from other sources, have been used for individual States. The ratios are as follows : New South Wales (including the Australian Capital Territory) 54 per cent, Victoria 53, Queensland 52, South Australia (including the Northern Territory) 50, Western Australia 49 and Tasmania 49. As the number of male units used in calculating Australian average weekly earnings is the sum of the estimates for the States, a separate ratio for Australia as a whole is not used, but the weighted average of the State ratios is approximately 52.5 per cent.
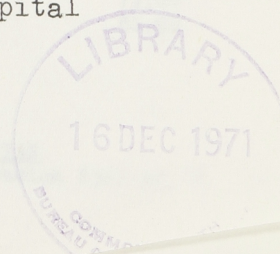
4.   Quarterly figures are affected by seasonal influences. For example, special payments, including prepayment for holiday periods, tend to raise the December quarter and to depress the March quarter averages. In addition, figures for all quarters are affected by the varying incidence of pay-days in successive quarters. Allowance for the varying incidence of pay-days and for seasonal factors has been made in calculating the seasonally adjusted estimates shown in the tables. Particulars of the method of seasonal adjustment are given on page 2.

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT (a)
($)

Period	N.S.W. (b)	Vic.	Qld	S.A. (c)	W.A.	Tas.	Australia Original	Australia Seasonally Adjusted
1969-70	78.80	78.10	69.20	70.90	75.50	70.80	76.10	..
1970-71	87.90	86.20	77.80	78.40	84.60	78.70	84.70	..
1970 - June quarter	82.30	81.10	71.90	73.50	78.00	74.30	79.10	78.80
Sept. "	83.50	82.10	73.90	76.10	80.50	74.40	80.70	80.00
Dec. "	89.70	87.50	79.10	78.70	85.70	80.50	86.10	81.90
1971 - Mar. "	85.00	83.70	r75.90	76.50	82.40	74.90	82.10	87.50
June " r	93.20	91.60	82.70	82.20	89.50	85.00	89.80	88.60
Sept. "	92.70	91.40	83.10	85.00	92.30	82.30	90.00	90.10

a) See explanation in paragraph 3 above. (b) Includes the Australian Capital Territory. (c) Includes the Northern Territory. r - revised.

Method of Seasonal Adjustment

5.   The seasonally adjusted estimates of average weekly earnings per employed male unit shown on page 3 have been calculated by using the X-11Q Variant of the U.S. Bureau of Census Method II seasonal adjustment programs, a description of which is given in the Bureau of Census and Statistics publication "Seasonally Adjusted Indicators 1971" (Reference No. 1.10).

6.   Multiplicative adjustment is employed in calculating the seasonally adjusted data. In calculating seasonal factors for the series a 3 term moving average of a 5 term moving average is employed. The trend is calculated by using a 5 term (i.e. 5 quarter) weighted moving average. The program standard limits for graduated treatment of extremes (1.5 and 2.5 standard deviations) are used.
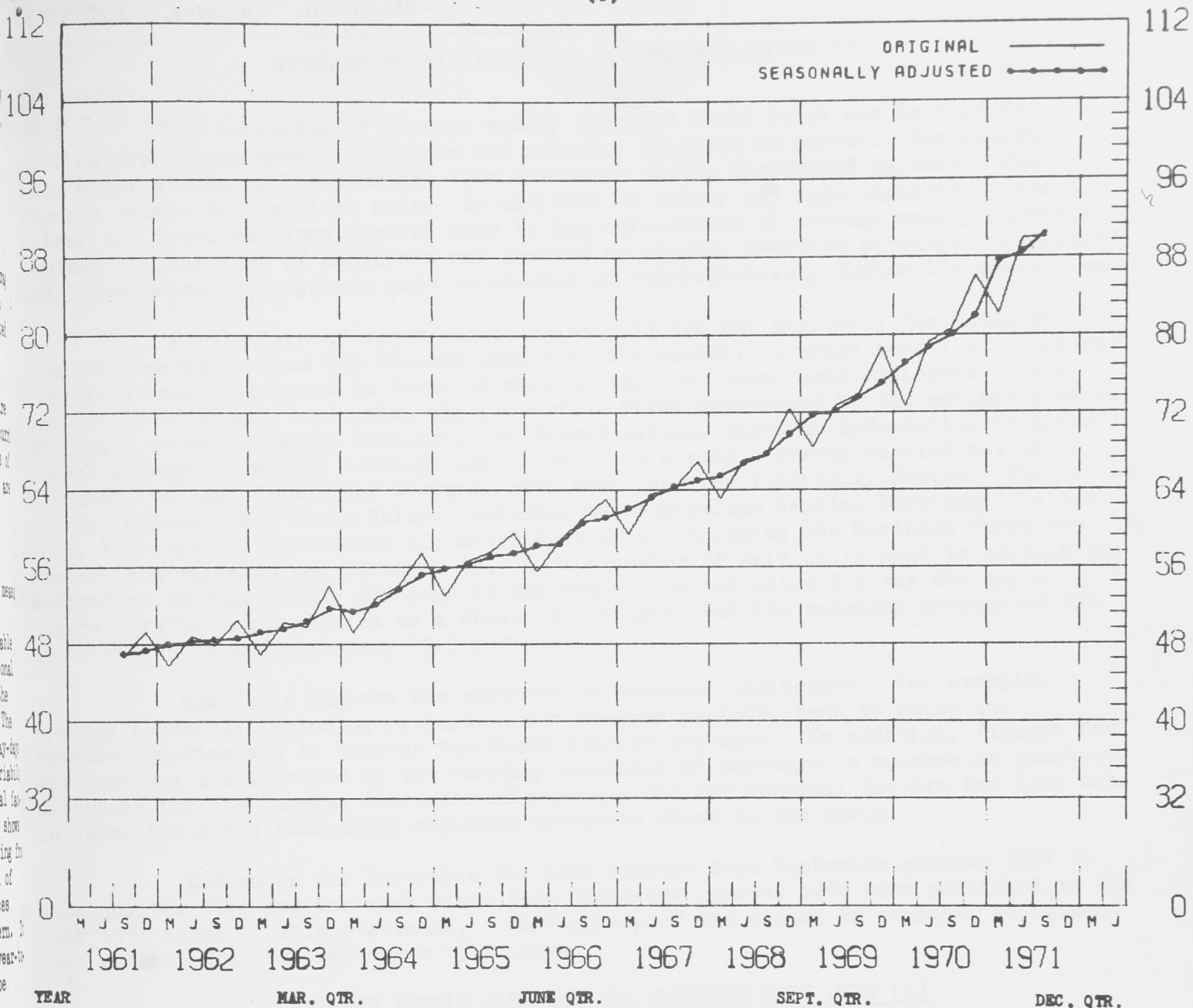
7.   In addition to the above program options some special adjustments are made. Allowance is made for the effects of the varying incidence of pay-days occurring in successive quarters. Also, before seasonal factors are calculated the effects of major awards and determinations of Commonwealth and State industrial authorities are removed from the series. After calculation of the seasonal factors these latter effects are added back to the series.

8.   To assist in interpreting movements shown by the series, selected measures of variability for the original and seasonally adjusted data, for the trend and irregular components and for the seasonal adjustment factors are shown in the table below. These measures give an indication of the relative magnitude of the seasonal effects which have been removed from the series and a guide as to how much of the variability of the series is due to trend and how much to irregular elements. The effects removed by the special adjustments made for the varying incidence of pay-days and for major awards and determinations are not included in the measures of variability relating to the trend, irregular series and the seasonal factors. (For seasonal factors, the average percentage change from year to year (without regard to sign) shows the average rate at which the seasonal pattern is estimated to have been changing from year to year.) The measures of variability also serve to give some indication of whether a movement in a seasonally adjusted series is attributable to influences beyond the normal irregular variation and normal changes in the seasonal pattern. It is, however, to be borne in mind that measures of the quarter-to-quarter and year-to-year change are averages; changes for the individual quarters and years may be considerably larger or smaller than the averages shown.

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT, AUSTRALIA
Measures of variability

| Average percentage change without regard to sign ||||| |
| From quarter to quarter in - ||||| From year to year in seasonal factors |
Original series	Seasonally adjusted series	Trend series	Irregular series	Seasonal factors	
5.32	0.95	0.84	0.48	4.49	0.04

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT, AUSTRALIA
($)

YEAR	MAR. QTR.	JUNE QTR.	SEPT. QTR.	DEC. QTR.
		ORIGINAL		
1961			46.70	49.20
1962	45.70	48.80	47.90	50.50
1963	46.90	50.30	49.80	54.10
1964	49.10	52.80	54.10	57.50
1965	53.00	56.60	57.60	59.60
1966	55.50	58.70	60.90	63.10
1967	59.30	63.50	64.20	66.90
1968	63.00	67.10	67.60	72.30
1969	68.30	72.60	73.90	78.70
1970	72.50	79.10	80.70	86.10
1971	82.10	89.80	90.00	
		SEASONALLY ADJUSTED		
1961			47.10	47.30
1962	48.00	48.30	48.40	48.50
1963	49.30	49.70	50.30	51.60
1964	51.30	52.10	53.80	55.10
1965	55.80	56.40	57.10	57.40
1966	58.20	58.40	60.70	61.10
1967	62.00	63.20	64.20	64.90
1968	65.50	66.80	67.70	69.80
1969	71.70	72.20	73.60	75.00
1970	77.10	78.80	80.00	81.90
1971	87.50	88.60	90.10	